

We claim:

1. A method for monitoring a call, originating from a cellular telephone modem (CTM) device and terminating in a destination network, in a system including a converter operative to convert call content from a CTM format to a Teletype for Telephone Devices for the Deaf (TTY/TDD) format and a Call Content Delivery Unit (CCDU), the method comprising:

receiving the call in a media gateway of a mobile switching center (MSC);

recognizing the call as having call content in CTM format by the MSC;

recognizing the call as being a monitored call by the MSC;  
instructing the media gateway by the MSC to establish a first bearer path to the converter;

establishing the first bearer path;

instructing the media gateway by the MSC to establish a second bearer path from the converter to the CCDU;

establishing the second bearer path;

instructing the media gateway by the MSC to establish a third bearer path from the CCDU to the destination network;

establishing the third bearer path;

delivering the call content in CTM format to the converter on the first bearer path;

converting the call content in CTM format to call content in TTY/TDD format by the converter;

delivering the call content in TTY/TDD format to the CCDU via the second bearer path;

collecting the call content in TTY/TDD format by the CCDU; and,

delivering the call content in TTY/TDD format to the destination network via the third bearer path.

2. The method as set forth in claim 1 wherein the recognizing of the call as being in CTM format is accomplished during a call set-up process.

3. The method as set forth in claim 1 wherein the recognizing of the call as a monitored call comprises accessing a Home Location Register (HLR).

4. The method as set forth in claim 1 wherein the establishing of the first bearer path comprises establishing a path between the media gateway and the converter.

5. The method as set forth in claim 1 wherein the establishing of the second bearer path comprises establishing paths between the converter and the media gateway and between the media gateway and the CCDU.

6. The method as set forth in claim 1 wherein the establishing of the third bearer path comprises establishing a path between the CCDU and the media gateway.

7. A method for monitoring a call, terminating in a cellular telephone modem (CTM) device and originating from another network, in a system including a converter operative to convert call content from a CTM format to a Teletype for Telephone Devices for the Deaf (TTY/TDD) format and a Call Content Delivery Unit (CCDU), the method comprising:

- receiving the call in a media gateway of a mobile switching center (MSC);
- recognizing the call as terminating in the CTM device for processing call content in CTM format by the MSC;
- recognizing the call as being a monitored call by the MSC;
- instructing the media gateway by the MSC to establish a first bearer path to the CCDU;
- establishing the first bearer path;
- instructing the media gateway by the MSC to establish a second bearer path from the CCDU to the converter;
- establishing the second bearer path;
- instructing the media gateway by the MSC to establish a third bearer path from the converter to the CTM device;
- establishing the third bearer path;
- delivering the call content in TTY/TDD format to the CCDU on the first bearer path;
- collecting the call content in TTY/TDD format to by the CCDU;
- delivering the call content in TTY/TDD format to the converter via the second bearer path;
- converting the call content from TTY/TDD format to CTM format by the converter; and,

delivering the call content in CTM format to the CTM device via the third bearer path.

8. The method as set forth in claim 7 wherein the recognizing of the call as terminating in CTM format is accomplished during a call set-up process.

9. The method as set forth in claim 7 wherein the recognizing of the call as a monitored call comprises accessing a Home Location Register (HLR).

10. The method as set forth in claim 7 wherein the establishing of the first bearer path comprises establishing a path between the media gateway and the CCDU.

11. The method as set forth in claim 7 wherein the establishing of the second bearer path comprises establishing paths between the CCDU and the media gateway and between the media gateway and the converter.

12. The method as set forth in claim 7 wherein the establishing of the third bearer path comprises establishing a path between the converting and the media gateway.

13. An apparatus for monitoring a call originating from a cellular telephone modem (CTM) device and terminating in a destination network, the apparatus comprising:

- means for receiving the call;
- means for recognizing the call as having call content in CTM format;
- means for recognizing the call as being a monitored call;
- means for instructing a media gateway to establish a first bearer path to the converter;
- means for establishing the first bearer path;
- means for instructing the media gateway to establish a second bearer path;
- means for establishing the second bearer path;
- means for instructing the media gateway to establish a third bearer path;
- means for establishing the third bearer path;

means for transmitting the call content in CTM format on the first bearer path;

means for converting the call content in CTM format to call content in TTY/TDD format;

means for transmitting the call content in TTY/TDD format on the second bearer path;

means for collecting the call content in TTY/TDD format; and,

means for delivering the call content in TTY/TDD format to the destination network via the third bearer path.

14. The apparatus as set forth in claim 13 wherein the means for recognizing the call as a monitored call includes means for accessing a Home Location Register (HLR).

15. The apparatus as set forth in claim 13 wherein the first bearer path comprises a path between the media gateway and the converting means.

16. The apparatus as set forth in claim 13 wherein the second bearer path comprises paths between the converting means and the media gateway and between the media gateway and the collecting means.

17. The apparatus as set forth in claim 13 wherein the third bearer path comprises a path between the collecting means and the media gateway.

18. An apparatus for monitoring a call terminating in a cellular telephone modem (CTM) device and originating from another network, the apparatus comprising:

means for receiving the call;

means for recognizing the call as terminating in the CTM device for processing call content in CTM format;

means for recognizing the call as being a monitored call;

means for instructing a media gateway to establish a first bearer path to the CCDCU;

means for establishing the first bearer path;

means for instructing the media gateway to establish a second bearer path;

means for establishing the second bearer path;

means for instructing the media gateway to establish a third bearer path;

means for establishing the third bearer path;

means for transmitting the call content in TTY/TDD format on the first bearer path;

means for collecting the call content in TTY/TDD format;

means for transmitting the call content in TTY/TDD format on the second bearer path;

means for converting the call content in TTY/TDD format to CTM format; and,

means for delivering the call content in CTM format to the CTM device via the third bearer path.

19. The apparatus as set forth in claim 18 wherein the means for recognizing the call as a monitored call includes means for accessing a Home Location Register (HLR).

20. The apparatus as set forth in claim 18 wherein the first bearer path comprises a path between the media gateway and the collecting means.

21. The apparatus as set forth in claim 18 wherein the second bearer path comprises paths between the collecting means and the media gateway and between the media gateway and the converting means.

22. The apparatus as set forth in claim 18 wherein the third bearer path comprises a path between the converting means and the media gateway.

23. A mobile switching center (MSC) operative to allow monitoring of a call between a cellular telephone modem (CTM) device and another network, the mobile switching center comprising:

a media gateway operative to receive the call;

an MSC server operative to recognize the call as having call content in CTM format or as terminating in the CTM device, to recognize the call as being a monitored call, and to instruct the media gateway to selectively establish bearer paths upon recognition that the call content is in CTM format or terminates in the CTM device and that the call is a monitored call;

a converter operative to convert the call content in CTM format to call content in TTY/TDD format and to convert al content in TTY/TDD format to CTM format; and,

a call content delivery unit (CCDU) operative to collect the call content in TTY/TDD format.

24. The mobile switching center (MSC) as set forth in claim 23 wherein a bearer path is established by the media gateway between the media gateway and the converter upon the recognition by the MSC server.

25. The mobile switching center (MSC) as set forth in claim 24 wherein the media gateway is operative to send and receive the call content in CTM format to and from the converter along the bearer path.

26. The mobile switching center (MSC) as set forth in claim 23 wherein a bearer path is established by the media gateway between the converter and the CCDU upon the recognition by the MSC server.

27. The mobile switching center (MSC) as set forth in claim 26 wherein the converter is operative to send and receive the call content in TTY/TDD format to and from the CCDU along the bearer path.

28. The mobile switching center (MSC) as set forth in claim 23 wherein a bearer path is established by the media gateway between the CCDU and the media gateway upon the recognition by the MSC server.

29. The mobile switching center (MSC) as set forth in claim 28 wherein the CCDU operative to send and receive the call content in TTY/TDD format to and from the media gateway along the bearer path.

30. The mobile switching center (MSC) as set forth in claim 23 wherein the MSC server includes means for accessing a Home Location Register (HLR) to determine if the call is a monitored call.

31. The mobile switching center (MSC) as set forth in claim 23 wherein the recognizing of the call as being in CTM format or as terminating in a CTM device is accomplished during a call set-up process.